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ATTACHMENT A
Remarks

Claims 1, 2, 4-6 and 8-21 are pending in the present application. By this Amendment, Applicants have amended claim 1. Applicants respectfully traverse the rejections in the outstanding Office Action based on the discussion which follows.

Claims 1, 2, 4-6 and 8-10 were rejected under 35 U.S.C. § 112, second paragraph as being indefinite for reciting "in a case of a substantially linear support...". By this Amendment, Applicants have amended claim 1 to more clearly recite Applicants' invention and to be more consistent with the original claim recitation wherein the support is now defined as having all external dimensions less than 100 μm, and the Examiner confirmed in a telephone discussion with Applicants' counsel that the new language was suitable under 35 U.S.C. § 112. Support for the amendment can be found in original claim 1 where the surface layer was previously recited as having its largest external dimension less than 100 μm. In other words, since the largest dimension is less than 100 μm, all dimensions necessarily must be less than 100 μm. Therefore, the amendment to claim 1 does not constitute new matter. Further, as indicated above, the claim amendment obviates the 35 U.S.C. § 112, second paragraph rejection. Therefore, Applicants respectfully request that the rejection to the claims under 35 U.S.C. § 112, second paragraph be withdrawn.

Claims 1-2 and 4-10 were rejected under 35 U.S.C. § 103(a) as being unpatentable over EP 03 95 300 (hereinafter EP '300), Rigby et al. (hereinafter Rigby), or Aurenius. In the Office Action, it was alleged that the present support is the miniaturization of prior art components and which miniaturization is obvious as a way to lower material costs, use less space to store the device, etc. Applicants respectfully

traverse the rejections to the claims under 35 U.S.C. § 103(a) as none of the aforementioned references teaches or suggests the claimed solid support.

The present invention is directed to a support for a biochemical assay having a spatially varying pattern for identification purposes and in which the support has all external dimensions less than 100 µm. Further, the support forms an aqueous suspension. The present support is distinguishable over the prior art which fails to teach or suggest the aforementioned solid support dimensions or ability to form an aqueous suspension.

Contrary to the Examiner's assertion, the present support is not merely a result of scaling down the devices of the prior art as will be discussed in further detail below with regard to the present support. Furthermore, the claimed dimensions and the characteristic that a plurality of supports can form an aqueous suspension defines physical characteristics and structure distinguishing the claimed support over the prior art. In order for the present support to form an aqueous solution, the support must have physical characteristics and structure which permit the support to form the aqueous suspension. Therefore, reciting the "whereby an aqueous suspension for performing a bioassay is formable from a plurality of support" defines physical and structural characteristics of the claimed support and not merely an intended use.

Referring now to the cited prior art, EP '300, Rigby and Aurenius fail to teach or suggest the claimed support having all external dimensions having less than 100 µm and being able to form an aqueous suspension. Specifically, it would not be obvious for one of ordinary skill in the art to modify the disclosures of the prior art to form a support having the claimed dimensions or the physical characteristics which permit the support

to form an aqueous support as claimed. In fact, the prior art actually teaches away from reducing the size of the respective devices to have the claimed external dimensions, the prior art all teaching that devices of larger dimensions are necessary in order to facilitate use in their respective systems. Thus, the disclosures fail to motivate one of ordinary skill in the art to form a support having the claimed dimensions and physical characteristics. In order to further support Applicants' argument with the Amendment, Applicants submit a declaration by Peter Swarbrick (hereinafter the "Swarbrick Declaration"), one of ordinary skill in the art, familiar with the present application and an officer of the Assignee.

It would not have been obvious for one of ordinary skill in the art to modify the prior art devices to form the claimed support having all external dimensions less than 100 μm and being able to form an aqueous suspension which has specific physical properties making it suitable for use in multiplexed assays (see e.g. Swarbrick Declaration paragraphs 4-6). The claimed dimension and the characteristic of being able to form an aqueous suspension provides advantages and features not obvious from the prior art which teach completely different devices for use in completely different purposes.

The EP '300 device and Rigby membrane are macroscopic objects which have dimensions larger than 100 μm thereby rendering them unfit for use if scaled down to have a dimension less than 100 μm. In other words, if the devices of EP '300 or Rigby were to have the claimed dimensions, the devices would fail to be suitable for use as disclosed in the respective disclosures.

For example, with regard to the EP '300 diagnostic test device and in particular Figures 6A and 6B which show device 65 within box 61, if the device were modified to have the claimed dimensions, one would not be able to detect a visible color change in the device especially since the device as modified would hardly be visible to the naked eye in the first place. Therefore, one would not be motivated to reduce the size of the EP '300 device to have the claimed dimensions.

With regard to the filtration membrane of Rigby, Rigby teaches away from reducing all dimensions to less than 100 μm as it is conventional to have a filtration membrane with a surface area as large as possible in order to increase the flow of filtrate through the membrane. Indeed it would be completely contrary to the disclosure of Rigby to have a filtration membrane with the claimed dimensions, as the flow of filtrate through such a membrane would be negligible. Therefore, Rigby fails to provide any motivation and in fact teaches away from reducing the size of the filtration membrane to have the claimed dimensions.

Based on the foregoing, the EP '300 device and Rigby membrane would lose their ability to perform their respectively disclosed functions if reduced to a size having the dimensions of the claimed support. Accordingly, the claimed support dimension would not be obvious from EP '300 or Rigby.

With regard to the Aurenius microlabels, the method of producing the microlabels is disclosed in Aurenius col. 13, line 59 to col. 14 line 19 with reference to Aurenius Figure 11. The smallest disclosed label is 1mm x 1mm (Aurenius col. 4, line 47). However, the square microlabels 208 shown in Aurenius Figure 11 have a thickness which is approximately 1/10 of the length of the side of the square. So even if the

square microlabels could be formed with a diagonal length of 100 μm to give a side length of about 70 μm, which is over an order of magnitude smaller than the smallest labeled disclosed by Aurenius, the thickness of the label would then have to be about 7 μm. However a 7 μm thickness is unfeasibly thin to be formed by the slicing procedure of Aurenius col. 14, lines 7-11. Consequently, Aurenius fails to enable one of ordinary skill in the art to form such a label and therefore Aurenius fails to teach or suggest in any way the claimed support with less than 100 μm dimension.

Furthermore, in accordance with the In re Rinehart, 531 F.2d 1048, 189 USPQ 143 (CCPA 1976) decision, the presently claimed support is not a modification of "scaling... [up]... an old process" as it is not possible to "scale" the prior art devices to result in the claimed support. For example, with regard to the Aurenius method, it is not possible to "scale down" the Aurenius label to have the claimed dimensions. That is, Aurenius fails to provide any disclosure how to modify its method to produce a label with the claimed dimensions.

Based on the foregoing and the Swarbrick Declaration, Applicants respectfully submit that claims 1-2, 4-6 and 8-10 are not obvious in view of the aforementioned prior art references.

In view of the foregoing, Applicants respectfully submit that the present application is in condition for allowance.

END OF REMARKS